Phonetic and Phonological Accommodation in ELF Interactions:
Interactional Intelligibility and Sufficiency from an English as a Lingua Franca Perspective and its Implications for English Pronunciation Pedagogy

George O'Neal

A thesis submitted for the degree of Doctor of Philosophy

Graduate School of Education

Waseda University

September 2018

Phonetic and Phonological Accommodation in ELF Interactions: Interactional Intelligibility and Sufficiency from an English as a Lingua Franca Perspective and its Implications for English Pronunciation Pedagogy

George O'Neal

Abstract

This research investigates how English as a lingua franca (ELF) users maintain mutually intelligible pronunciation and co-construct sufficient pronunciation in natural and experimental settings. It particularly focuses on the efficacy of segmental repair and adjustment strategies (Matsumoto, 2011; O'Neal, forthcoming; O'Neal & Matsumoto, forthcoming) within ELF interactions. In the current era of globalization, the majority of English users are non-native English speakers (NNESs), and an increasing number of them use English to communicate trans-, intra-, and inter-nationally (Crystal, 2003; Graddol, 2006; Dewey, 2007; Jenkins, 2009; Seidlhofer, 2011). Furthermore, these kinds of interactions are largely successful (Mauranen, 2006; Björkman, 2014; Pietkäinen, 2018; Matsumoto, 2018) and utilize intelligible pronunciation that differs from native English speaker (NES) pronunciation in many cases (Jenkins, 2000; Kirkpatrick, 2010; Matsumoto, 2011; Deterding, 2013; O'Neal, forthcoming). However, despite these facts, NNESs are still frequently regarded as deficient in their knowledge of intercultural pragmatics (e.g., Celce-Muria & Olshtain, 2000; Wong & Waring, 2010) and NES pronunciation norms are still often the benchmark of success in pronunciation research (e.g., Saito & Akiyama, 2017; Crowther, Trofimovich, Isaacs & Saito, 2015), pronunciation testing (e.g., Celce-Murcia, Brinton & Goodwin, 2010; Harding, 2018; Ghanem & Kang, 2018), and pronunciation learning (e.g., Derwing & Munro, 2005; Celce-Murcia et al., 2010; Lindemann, 2017). As such, an urgent need exists to examine the pragmatic strategies that allow for the maintenance of mutually intelligible pronunciation and the co-construction of sufficient pronunciation among speakers from different first language backgrounds in order to account for the sociolinguistic reality of English use in today's world.

In particular, this research examines the interactional management of intelligible and sufficient pronunciation. This is because observations of the research data from a conversation analytic perspective (e.g., Schegloff, 2007; Sidnell, 2010) reveal that both the maintenance of mutual intelligibility and the co-construction of sufficient pronunciation become the sequential goals of some interactions. This is contrary to current ELF research which focuses on the bilateral relationship between intelligibility and phonetics rather than the multilateral relationship between intelligibility, sufficiency, phonetics, and interaction (e.g., Jenkins, 2000; Deterding, 2013; Zhang, 2015; Walker & Zoghbor, 2015; Deterding & Nur Raihan, 2016; Low, 2016; Gardiner & Deterding, 2018; Zoghbor, 2018). Although some existing ELF research admits that accommodation exists among ELF users to maintain mutually intelligible pronunciation (e.g., Jenkins, 2000, pp. 167-194; Deterding, 2013, pp. 85-87), neither Jenkins (2000) nor Deterding (2013) provide any actual examples of accommodation processes to maintain mutual intelligibility (see Matsumoto, 2011 for an exception in ELF research). Furthermore, when it comes to the co-construction of sufficient pronunciation in ELF interactions, no ELF research explicitly deals with it. This research therefore focuses on the analysis of how speakers from different first language backgrounds interactionally manage intelligible and sufficient pronunciation, and further argues that a valid interaction-independent standard to assess mutual intelligibility does not exist; an interaction-dependent standard is the only valid means with which to evaluate mutually intelligible pronunciation and sufficient pronunciation.

This thesis has nine chapters. Chapter 1 introduces the entire thesis. Chapter 2 describes the theoretical framework for the whole project. Chapter 3 reviews existing ELF research and identifies the research gap that this study intends to fill. Chapter 4 explains the methodological background of this research, justifies the research design that this study adopts, and describes the main data collection procedures. Chapters 5, 6, 7, and 8 present the findings of this study, which discuss the sequential organization of segmental repair (Chapter 5), the sequential organization of the co-construction of sufficient pronunciation (Chapter 6), the relationship between phonetic segment adjustments and mutual intelligibility (Chapter 7), and the results of an experiment which assessed the efficacy of segmental repair on the diachronic development of mutual intelligibility (Chapter 8) respectively. Chapter 9

summarizes the key findings of this study and discusses the pedagogical implications of the conclusions, delineates the limitations of the research, and provides suggestions for further research.

To pursue the research aim, this study adopted two separate research designs. First, a conversation analytic approach (e.g., Schegloff, 2007; Sidnell, 2010) was combined with statistical analyses that are sensitive to the intricacies of turn change and sequential position (e.g., Stivers, 2015) and phonetic analyses that respect the emic perspective (e.g., Matsumoto, 2011; Szczepek Reed, 2012) to investigate how ELF users maintain mutually intelligible pronunciation (e.g., Matsumoto, 2011; O'Neal, forthcoming) and co-construct sufficient pronunciation (e.g., O'Neal & Matsumoto, forthcoming). Conversations among students from different first language backgrounds who were studying at a large public Japanese university were audio-recorded by the participants themselves. Eighty-five students from five different first language backgrounds participated in the recordings. A total of eleven hours and fifty-five minutes of spoken interactions were gathered. The data were listened to repeatedly and transcribed according to a modified conversation analytic transcription system that allows for phonetic analysis (e.g., Matsumoto, 2011; Szczepek Reed, 2012). The phonetic aspects of the interactions and their relevance to intelligible pronunciation and sufficient pronunciation were analyzed in detail (see Chapters 5, 6, and 7). Second, an experimental approach was adopted to investigate the multilateral relationship between segmental repair, interaction, and intelligibility. Ninety students from eleven different first language backgrounds participated in the experiment. The results of the experiment were evaluated through statistical and conversation analytic methods (see Chapter 8).

Both approaches reveal that ELF users in natural and experimental settings are interactionally successful in maintaining mutual intelligibility and co-constructing sufficient pronunciation. Chapter 5 discusses the sequential organization of segmental repair sequences, which are the primary means with which ELF users orient to specifically mutual intelligibility as the goal of sequence. For example, speakers could conduct *reactive segmental repair* on pronunciations that have been oriented to an unintelligible; they could also conduct *preemptive segmental repair* on pronunciations that are potentially unintelligible but not specifically oriented to as such. The existence of multiple organizations of segmental repair

to maintain mutual intelligibility demonstrates that segmental repair is a multifaceted interactional phenomenon.

Chapter 6, on the other hand, discusses the co-construction of sufficient pronunciation. ELF users sometimes orient to states beyond the maintenance of mutual intelligibility of pronunciation as the phonetic goal of a sequence, which reveals that phonetic negotiations are not limited to the purpose of maintaining mutual intelligibility. This means that speakers can orient to *sufficiency* as the interactional issue at hand. For example, ELF users conduct phonetic adjustments on pronunciations even though mutual intelligibility has been maintained. Such instances reveal that speakers sometimes orient to pronunciations as insufficient even if mutually intelligible, which demonstrates that the sufficiency of pronunciation can be a central aspect of an interaction. This phenomenon has received no attention in ELF research at all, and Chapter 6 explores the phenomenon of the co-construction of sufficient pronunciation.

Chapter 7 catalogues the phonetic adjustments that are conducted on pronunciations so that they remain mutually intelligible and determines which phonetic adjustments are most common within segmental repair sequences. Within the corpus, phonetic adjustments appear in four different varieties: phonetic segment *modification*, phonetic segment *insertion*, phonetic segment *deletion*, and phonetic segment *resegmentation*. Statistical analyses that respect conversation analytic considerations (e.g., Stivers, 2015) of these four phonetic modifications reveal that *modification* is frequent and that *deletion* and *resegmentation* are rare to a statistically significant degree. The upshot of these facts demonstrate that even unintelligible pronunciation is usually phonetically close to a mutually intelligible variant, often differing by just one manner or place of articulation (O'Neal, forthcoming). This analysis suggests that even slight variations to phonetics can render a pronunciation unintelligible. Furthermore, this chapter assesses the extent to which functional load theory predicts the phonetic segment adjustments within the segmental repair sequences in the two corpora gathered for this study.

Chapter 8 describes an experiment that was designed to test the efficacy of segmental repair on the development of mutual intelligibility. Ninety students participated in an experiment and were divided into three conditions: an *unlimited interaction* condition, a

segmental repair condition, and a *script* condition. Each of the three conditions had different restrictions placed on how participants could communicate during the experimental task. Mutual intelligibility was operationalized as the placing minimal pair word cards in the location described by one's partner. Statistical analyses of the results revealed that overall segmental repair was more effective than just script reading but less effective than unlimited interaction. Furthermore, a correlation analysis between segmental repair attempts and mutual intelligibility revealed a statistically significant relationship, which demonstrates that segmental repair is correlated with high mutual intelligibility.

Chapter 9 summarizes the key findings of the four chapters. It concludes that ELF users are largely intelligible to each other; that is, neither repair sequences nor segmental repair sequences are particularly frequent within the corpus gathered for this study. This finding reinforces the argument that ELF users are legitimate users of English in their own right (Matsumoto, 2018; Kohn, 2018; Pitzl, 2018). Indeed, even when mutual intelligibility does break down because of a phonetic trouble source, ELF users can conduct segmental repair on it in order to restore it. This in turn demonstrates that ELF users are fully capable of adjusting to current emergent contingencies within interactions (Widdowson, 2003, 2008; Seidlhofer, 2011; Matsumoto, 2011). Furthermore, the segmental repair strategies that speakers utilize can be divided into four categories: reactive, preemptive, reversion, and serendipitous non-segmental repair (O'Neal, forthcoming). Within segmental repairs, the phonetic segments of a trouble source pronunciation and the phonetic segments of a ratified candidate intelligible pronunciation are often very similar (O'Neal, forthcoming). However, not all phonetic adjustments are an indication that mutual intelligibility is being negotiated. ELF users sometimes adjust the phonetic segments of a pronunciation even though mutual intelligibility has not broken down (O'Neal & Matsumoto, forthcoming). Last, experimental evidence suggests that segmental repair is effective in maintaining and developing mutual intelligibility. In total, the evidence gathered by this thesis suggests that phonetic accommodation is a significant portion of communicative ability within ELF interactions (Jenkins, 2000; Matsumoto, 2011; Deterding, 2013; O'Neal, 2015a, 2016b, 2017, forthcoming).

However, all research has limitations and this research has several that could be addressed in future research. First, the limited sample size of heterogeneous L1 backgrounds in this study limits its generalizability. It is likely that a greater number of heterogeneous L1 backgrounds would have yielded a different frequency of segmental repairs, different types of segmental repairs, and different kinds of segmental adjustments. Second, another limitation of this research is what segmental repair analysis can detect. Segmental repair analysis can detect the breakdown and restoration of mutual intelligibility and the concomitant segmental adjustments, but it can only do this if one of the interactants specifically orients to a word or phrase as unintelligible (O'Neal, forthcoming). Therefore, segmental repair analysis can only detect what some scholars would call overt catastrophic intelligibility problems (i.e., intelligibility breaks down to the extent that the speakers have to stop the ongoing action to attend to specifically the restoration of mutual intelligibility). Third, this research has focused on the negotiation of mutually intelligible pronunciation, claiming that mutually intelligible pronunciation is greatly facilitated by interaction (O'Neal, forthcoming). However, with the exception of the experimental data, all of the data that was gathered for this study were audio-recordings, and the preponderance of audio-recordings may have left out non-auditory elements that affected the formation of mutually intelligible pronunciation (Thoms, 2014; Pennycook, 2016; Smotrova, 2017). It is likely that non-auditory elements that affected mutual intelligibility were undetected.

Despite these limitations, it is still hoped that this research provides some insights into the nature of the multilateral relationship among phonetics, ELF interactions, mutual intelligibility, and sufficiency.

Table of Contents

References

Björkman, B. (2014). An analysis of polyadic English as a lingua franca (ELF) speech: A communicative strategies framework. *Journal of Pragmatics, 66*, 122-138.

Celce-Murcia, M., Brinton, D., & Goodwin, J. (2010). *Teaching pronunciation*, 2nd ed. Cambridge: Cambridge University Press.

Crowther, D., Trofimovich, P., Saito, K., & Isaacs, T. (2015). Second language comprehensibility revisited: investigating the effects of learner background. *TESOL Quarterly, 49*(4), 814-837.

Crystal, D. (2003). *English as a global language*, 2nd ed. Cambridge: Cambridge University Press.

Derwing, T., & Munro, M. (2005). Second language accent and pronunciation teaching: A research-based approach. *TESOL Quarterly, 39*(3), 379-369.

Deterding, D. (2013). *Misunderstandings in English as a Lingua Franca*. Berlin: De Gruyter Mouton.

Deterding, D., & Nur Raihan, N. (2016). The role of vowel quality in ELF misunderstandings. *Journal of English as a Lingua Franca, 5*(2), 291-307.

Dewey, M. (2007). English as a lingua franca and globalization: An interconnected perspective. *International Journal of Applied Linguistics, 17*(3), 332-354.

Gardiner, I. A. & Deterding, D. (2018). Pronunciation and miscommunication in ELF interactions: An analysis of initial clusters. In J. Jenkins, W. Baker, & M. Martin (Eds.), *The Routledge handbook of English as a lingua franca* (pp. 224-232). New York: Routledge.

Ghanem, R., & Kang, O. (2018). Pronunciation features in rating criteria. In O. Kang & A. Ginther (Eds.), *Assessment in second language pronunciation* (pp. 115-136). London/New York: Routledge.

Graddol, D. (2006). *English next*. London: The British Council.

Harding, L. (2018). Validity in pronunciation assessment. In O. Kang & A. Ginther (Eds.), *Assessment in second language pronunciation* (pp. 30-48). London/New York: Routledge.

Jenkins, J. (2000). *The phonology of English as an international language*. Oxford: Oxford University Press.

Jenkins, J. (2009). *World Englishes: A resource book for students*, 2nd ed. London/New York: Routledge.

Kirkpatrick, A. (2010). *English as a lingua franca in ASEAN*. Hong Kong: Hong Kong University Press.

Kohn, K. (2018). MY English: A social constructivist perspective on ELF. *Journal of English as a Lingua Franca, 7*(1), 1-24.

Lindemann, S. (2017). Variation or 'error'? Perceptions of pronunciation variation and implications for assessment. In T. Isaacs & P. Trofimovich (Eds.), *Second language pronunciation assessment* (pp. 193-209). Bristol: Multilingual Matters.

Low, E. L. (2016). Phonological patterning for English as a lingua franca in Asia: Implications for norms and practice in multilingual Asia. *Journal of English as a Lingua Franca, 5*(2), 309-332.

Mauranen, A. (2006). Signaling and preventing misunderstanding in English as a lingua franca communication. *International Journal of the Sociology of Language, 177*, 123-150.

Matsumoto, Y. (2011). Successful ELF communications and implications for ELT: Sequential analysis of ELF pronunciation negotiation strategies. *The Modern Language Journal, 95*, 97–114.

Matsumoto, Y. (2018). "Because we are peers, we actually understand": Third-party participant assistance in English as a lingua franca classroom interactions. *TESOL Quarterly,* Advance online publication.

O'Neal, G. (2015a). Interactional intelligibility: the relationship between consonant modification and pronunciation intelligibility in English as a lingua franca in Japan. *Asian Englishes, 7*(3), 222-239.

O'Neal, G. (2015b). Segmental repair and interactional intelligibility: The relationship between consonant deletion, consonant insertion, and pronunciation intelligibility in English as a lingua franca in Japan. *Journal of Pragmatics, 85*, 122-134.

O'Neal, G. (2015c). ELF intelligibility: The vowel quality factor. *Journal of English as a Lingua Franca, 4*(2), 347-358.

O'Neal, G. (2015d). Consonant clusters and intelligibility in English as a lingua franca in Japan: Phonological modifications to restore intelligibility in ELF. *Journal of Pragmatics & Society, 6*(4), 615-636.

O'Neal, G. (2016a). Intelligibility and segmentation in English as a lingua franca in Japan. In K. Murata (Ed.), *Waseda working papers in ELF*, Vol. 5 (pp. 97-113). Tokyo: Waseda ELF Research Group.

O'Neal, G. (2016b). Intelligibility and segmental phoneme repair strategies in English as a lingua franca interactions among Chinese and Japanese speakers of English. *Chinese Journal of Applied Linguistics, 39*(4), 379-400.

O'Neal, G. (2017). The pragmatics of intelligible pronunciation: Preemptive and reactive segmental repair in English as a lingua franca interactions in Japan. In S. Assimakopoulos (Ed.), *Pragmatics at its interfaces* (pp. 257-277). Berlin/Boston: de Gruyter.

O'Neal, G. (forthcoming). The accommodation of intelligible segmental pronunciation: Segmental repairs and adjustments in English as a lingua franca interactions. *Journal of Second Language Pronunciation*.

O'Neal, G., & Matsumoto, Y. (forthcoming). Beyond intelligibility: Negotiating transintelligibility in English as a lingua franca interactions. *International Journal of Applied Linguistics*.

Pennycook, A. (2016). Posthumanist applied linguistics. *Applied Linguistics, 39*(4), 445-461.

Pietkäinen, K. (2018). Misunderstandings and ensuring understanding in private ELF talk. *Applied Linguistics, 39*(2), 188-212.

Pitzl, M. L. (2018). Transient international groups (TIGs): Exploring the group and development dimension of ELF. *Journal of English as a Lingua Franca, 7*(1), 25-58.

Saito, K., & Akiyama, Y. (2017). Video-based interaction, negotiation for comprehensibility, and second language speech learning: A longitudinal study. *Language Learning, 67*(1), 43-74.

Schegloff, E. A. (2007). *Sequence organization in interaction*. Cambridge: Cambridge University Press.

Seidlhofer, B. (2011). *Understanding English as a lingua franca*. Oxford: Oxford University Press.

Sidnell, J. (2010). *Conversation analysis: An introduction*. Malden: Wiley-Blackwell.

Smotrova, T. (2017). Making pronunciation visible: Gesture in teaching pronunciation. *TESOL Quarterly, 51*(1), 59-89.
Stivers, T. (2015). Coding social interaction: A heretical approach in Conversation Analysis? *Research on Language and Social Interactions, 48*(1), 1-19.
Szczepek Reed, B. (2012). A conversation analytic perspective on teaching English pronunciation: The case of speech rhythm. *International Journal of Applied Linguistics 22*(1), 67-87.
Thoms, J. (2014). An ecological view of whole-class discussions in a second language literature classroom: Teacher reformulations as affordances for learning. *The Modern Language Journal, 98*(3), 724-741.
Walker, R., & Zoghbor, W. (2015). The pronunciation of English as a lingua franca. In M. Reed & J. M. Levis (Eds.), *The handbook of English pronunciation* (pp. 433-453). West Sussex: Wiley Blackwell.
Widdowson, H. (2003). *Defining issues in English language teaching*. Oxford: Oxford University Press.
Widdowson, H. (2012). ELF and the inconvenience of established concepts. *Journal of English as a Lingua Franca, 1*(1), 5-26.
Wong, J., & Zhang Waring, H. (2010). *Conversation analysis and second language pedagogy: A guide for ESL/EFL teachers*. London/New York: Routledge.
Zhang, L. (2015). An empirical study of the intelligibility of English spoken by Chinese university students. *Chinese Journal of Applied Linguistics, 38*(1), 36-54.
Zoghbor, W. S. (2018). Teaching pronunciation to multi-dialect first language learners: The revival of the Lingua Franca Core (LFC). *System, 78*, 1-14.